

Amendments to the Claims

Please amend Claim 26, 32, 33 and claim 46. Please add new Claims 49-51. Claims 1-25 and claims 47-48 have been cancelled in response to a restriction requirement. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-25. (Cancelled)

26. (Currently Amended) A method of aseptically sampling a biofluid, comprising automatically:

collecting a biofluid sample by opening an inlet valve at a biofluid source site;

directing the sample through a trap to a biofluid process site by opening an outlet valve coupled to the process site, and closing a waste valve that couples ~~[[a]]~~ the trap and a waste site, ~~wherein the trap is located at~~ being a portion of a sampling conduit extending from the inlet valve to the outlet valve, and the waste valve being coupled to a low region of the trap;

isolating the biofluid sites by:

closing the inlet and outlet valves; and

opening the waste valve to drain biofluid from the trap to the waste site;

and

cleaning the sampling conduit before sample collection by directing a wash fluid through at least one valve selected from the inlet and outlet valves, and subsequently through the waste valve to the waste site.

27. (Original) The method of Claim 26, further comprising cleaning before collecting each sample.

28. (Original) The method of Claim 27, further comprising cleaning to reduce the number of bacterial colony forming units per milliliter of rinse water to less than about 100.

29. (Original) The method of Claim 27, further comprising cleaning to reduce macromolecule contamination in rinse water to less than about 1 part per million.
30. (Original) The method of Claim 27, further comprising cleaning by directing wash fluid through the outlet valve into the sampling conduit.
31. (Original) The method of Claim 30, further comprising employing a wash fluid selected from steam, compressed air, an organic solvent, supercritical CO₂, and an aqueous cleaning solution.
32. (Currently Amended) The method of Claim 31, further comprising directing the wash fluid through the ~~input~~ inlet valve to at the biofluid source site.
33. (Currently Amended) The method of Claim ~~32~~ 26, further comprising directing the wash fluid through a double isolated gate valve to the waste site, wherein at least one of the inlet and outlet valves ~~being~~ is a double isolated gate valve, ~~an~~ a waste output of each double isolated gate valve being coupled to the waste site.
34. (Original) The method of Claim 33, wherein the inlet valve is a double isolated gate valve.
35. (Original) The method of Claim 33, wherein the outlet valve is a double isolated gate valve.
36. (Original) The method of Claim 26, further comprising monitoring for a backflow condition while the biofluid sites are isolated by sensing fluid flow.
37. (Original) The method of Claim 36, further comprising sensing for fluid flow in the sampling conduit.

38. (Original) The method of Claim 36, further comprising sensing for fluid flow through the waste valve.
39. (Original) The method of Claim 36, further comprising isolating the biofluid sites by closing the waste valve and opening a relief valve that is located at a relief conduit, wherein the relief conduit has a proximal end coupled to the trap and a distal end coupled to the external environment.
40. (Original) The method of Claim 39, further comprising sensing for fluid flow in the relief conduit.
41. (Original) The method of Claim 40, further comprising excluding particulate contaminants from entering the relief conduit by employing a filter selected to remove particulates having a diameter of at least about .2 μm .
42. (Original) The method of Claim 41, further comprising collecting overflowing biofluid in an overflow reservoir at the relief conduit.
43. (Original) The method of Claim 26, further comprising locating the inlet and outlet valves at the same height.
44. (Original) The method of Claim 43, further comprising draining biofluid from the trap at a location that is lower than the inlet and the outlet valves by at least about 3 times the inside diameter of the conduit.
45. (Original) The method of Claim 44, further comprising draining biofluid from the lowest point of the trap.
46. (Currently Amended) A method of aseptically sampling a biofluid, comprising automatically:

collecting a biofluid sample by opening an inlet valve at a biofluid source site;
directing the sample to a biofluid process site by:
opening an outlet valve, coupled to the process site, that is located at the same height as the inlet valve;
closing a waste valve that couples a trap and a waste site, ~~wherein the trap~~ [[is]] located at being a portion of a sampling conduit extending from the inlet valve to the outlet valve, and the waste valve being coupled to a low region of the trap;
isolating the biofluid sites by:
closing the inlet and outlet valves;
opening the waste valve to drain biofluid from the trap to the waste site;
closing the waste valve and opening a relief valve located at a relief conduit, ~~wherein the relief conduit has~~ having a proximal end coupled to the trap and a distal end coupled to a filter selected to exclude particulate contaminants having a diameter of at least about .2 μm ; and
monitoring for backflow by sensing fluid flow in the relief conduit; and
cleaning the sampling conduit before collecting each sample, including:
directing a wash fluid through the outlet valve, into the sampling conduit, and through the waste valve to the waste site; and
reducing macromolecule contamination in the sampling conduit to less than about 1 part per million.

47-48. (Cancelled)

49. (New) A method of aseptically sampling a biofluid, comprising automatically:
collecting a biofluid sample by opening an inlet valve at a biofluid source site;
directing the sample to a biofluid process site by opening an outlet valve coupled to the process site, and closing a waste valve that couples a trap and a waste site, wherein the trap is located at a sampling conduit extending from the inlet valve to the outlet valve;
isolating the biofluid sites by:
closing the inlet and outlet valves; and

opening the waste valve to drain biofluid from the trap to the waste site;

and

cleaning the sampling conduit before sample collection by directing a wash fluid through a double isolated gate valve to the waste site, at least one of the inlet and outlet valves being the double isolated gate valve, an output of each double isolated gate valve being coupled to the waste site, through at least one valve selected from the inlet and outlet valves, and subsequently through the waste valve to the waste site, the wash fluid selected from steam, compressed air, an organic solvent, supercritical CO₂, and an aqueous cleaning solution.

50. (New) The method of Claim 49, wherein the inlet valve is a double isolated gate valve.
51. (New) The method of Claim 49, wherein the outlet valve is a double isolated gate valve.